

H., Ph.D. Dissertation, University of California, Riverside, pp. 88-132 (1992)). The sequence of the replicon RNA, produced by host transcription, RNA processing, and replication in the presence of a helper virus, is given in Figure 6 (SEQ ID NO: 1). Thus, the foreign gene, encoding CAT (the amino acid sequence of which is depicted by SEQ ID NO: 3), is placed on a RNA viral replicon, under control of the coat protein subgenomic promoter for messenger RNA synthesis (located at a 3' end of the movement protein gene).

In the Claims

12. A heterologous protein expressed using a replicon derived from a chromosomally integrated transgene capable of expressing at least one foreign gene in plant cells, possessing replication origins with substantial sequence homology to any plus sense, RNA virus capable of infecting plants, wherein the replicon is dependent for replication on a helper virus possessing trans-acting replication proteins, the replication proteins having substantial sequence homology to any plus sense, RNA virus capable of infecting plants.

13. A heterologous protein expressed using a replicon derived from a chromosomally integrated transgene capable of expressing at least one foreign gene in plant cells, possessing replication origins with substantial sequence homology to any plus sense, RNA virus capable of infecting plants, wherein the replicon is dependent for replication on a helper virus possessing trans-acting replication proteins, the replication proteins having substantial sequence homology to any plus sense, RNA virus capable of infecting plants, wherein said replicon codes for a viral movement protein, wherein said replicon is capable of moving the replicon-encoded genes away from the site of infection and is capable of systemic expression.